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a Thales company

EXS62 / EXS82
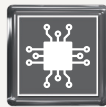
LTE-M NB-IoT 2G*)	**Embedded Processing**
Integrated SIM	**State of the Art Security**
Advanced Power Management System	**Multi Design Capability (LGA)**
Embedded IP Stack	**Secure Cloud Enrollment**
Incremental FOTA Updates	

CINTERION
Model: EXS82
S30960-S1111-A222-3
111111 22 333333 4   DC

Cinterion® EXS82/62 Wireless Module Platform

LTE-M, NB-IoT and 2G – LPWAN connectivity ready for prime time

Cinterion® EXS82/62 Wireless Module Platform
LTE-M, NB-IoT and 2G connectivity

The Cinterion® EXS82/62 IoT wireless module platform is driving evolution from LTE to 5G and enabling Low Power Wide Area (LPWA) connectivity for billions of new industrial applications. The platform delivers global LTE-M and NB-IoT connectivity with optional 2G fallback plus support for evolving 5G technologies. Delivering a range of highly efficient IoT-optimized data speeds, the platform is ideal for small, battery-operated devices in remote locations including smart meters, asset trackers, healthcare apps, wearables and smart city solutions.

Key Features
The Cinterion EXS82/62 IoT module platform supports all LTE bands and delivers a suite of MTC technologies including LTE Cat. M1, Cat. NB1 and Cat. NB2. EXS82 comes with support for 2G. Support for 3GPP Release 14 eliminates the need to migrate to a new chipset when technology needs evolve. The module offers an efficient architecture with PSM and eDRX plus embedded processing. The EXS82/62 also includes a module services engine that supports a range of Internet services and optimized operations. State of the art security features protect the device as well as data and provide secure enrollment in cloud platforms enabling trust in the IoT ecosystem.

An integrated eSIM authenticates IoT devices, encrypts data, and securely manages the connection to cellular networks. In order to help extend the life span of IoT solutions, Gemalto's unique Incremental Firmware Over The Air (FOTA) technology keeps IoT solutions current, allowing revision of only the portion of code that

needs updating thus saving power and bandwidth. The module's simplified power supply design and advanced management system extends battery lifetime and improves total cost of ownership.

Industrial Family Benefits
The Cinterion EXS82/EXS62 IoT wireless module platform is part of Gemalto's Industrial family, which offers reliability, IoT-optimized features and extreme efficiency for a range of cellular standards from 2G to 5G-ready Low Power Wide Area technologies including LTE-M and NB-IoT. All Industrial modules share an identical footprint enabling seamless backward and forward migration to protect your IoT investment as technology needs change. Smart module platforms with embedded systems improve design simplicity and lower Total Cost of Ownership. All Cinterion modules are compatible with Gemalto's comprehensive suite of solutions, services and platforms that help enterprises Connect, Secure and Monetize™ IoT technology.

GLOBAL LTE-M, NB-IOT

27.6 mm

18.8 mm
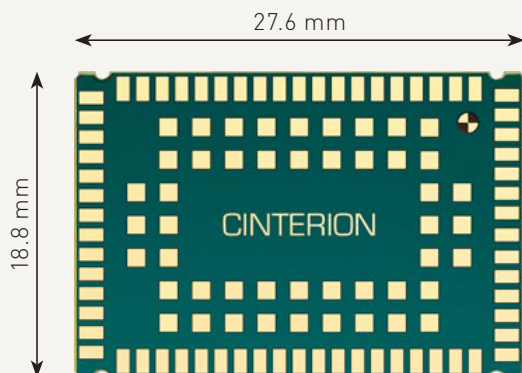
CINTERION

Streamlining the device-to-cloud journey
> EXS82/62 leverages unique digital IDs inherent to each Cinterion IoT Module along with a secure digital handshake to verify the authenticity of devices and applications. This allows streamlined and swift enrollment in any major IoT cloud platform. It also simplifies development and manufacturing eliminating the need for OEMs to provide their own secure production facilities.

Incremental FOTA
> Incremental Firmware Over The Air updates allow revision of only the portion of code that needs updating. This significantly reduces transmission time, power draw and throughput, which are all essential in preserving the investment in NB-IoT technology over the long life of IoT solutions.

Gemalto eSIM simplifies and secures IoT connectivity
> An embedded SIM strengthens security, authenticates devices, encrypts data and securely manages connections to cellular networks. It works seamlessly with Gemalto's subscription management solution to maintain connectivity for the lifecycle of devices. In addition, it simplifies integration, manufacturing and logistics while enabling smaller designs.

THE GEMALTO-THALES ADVANTAGE

> Trusted partner to 450+ global MNOs ensures products evolve in sync with networks and modules are pre-certified for all global mobile networks
> Core competency in SIM, eSIM and eUICC technology allows simplified integration with modules and lower Total Cost of Ownership (TCO)
> Expert design consulting, local market engineering support and a skilled 24/7 help desk streamline development and deployment

> Global leader in digital security solutions and platforms
> Experienced provider of software solutions for Quality of Service and product lifecycle management
> Extensive RF test capabilities and GCF/PTCRB pretests to validate readiness for solution approval process

CINTERION® EXS82 / EXS62 FEATURES

GENERAL FEATURES
> FDD-LTE Bands 1, 2, 3, 4, 5, 8, 12, 13, 14, 18, 19, 20, 25, 26, 27, 28, 66, 71, 85.
> Quad-Band GSM: 850, 900, 1800 and 1900 MHz [*]
> Integrated GNSS support (GPS/BeiDou/Galileo/GLONASS)
> Compatible with Cinterion® Industrial module footprint
> SIM Application Toolkit with BIP
> Control via standardized commands (Hayes, TS 27.007 and 27.005) and Cinterion® AT commands
> Embedded IPv4 and IPv6 TCP/IP stack access via AT command and transparent TCP/UDP services
> Internet Services: TCP server/client, UDP client, DNS, Ping, HTTP client, FTP client, MQTT client
> Secure Connection with TLS/DTLS
> Supply voltage range: 2.6-4.8 V
> Dimensions: 27.6 x 18.8 x 2.3 mm
> Weight: approx. 2.5 g
> Operating temperature: -40°C to +90°C

SPECIFICATIONS
> 3GPP Rel.14 Compliant Protocol
> LTE Power Class 5 (20 dBm)
> LTE Cat.M1 DL: max. 300 kbps, UL: max. 1.1 Mbps
> LTE Cat.NB1 DL: max. 27 kbps, UL: max. 63 kbps
> LTE Cat.NB2 DL: max.124 kbps, UL: max. 158 kbps
> E/GPRS Class 10 [*]
> SMS support (via NAS, via GSM)

SPECIAL FEATURES
> Optional eSIM included
> Firmware updatable via interface and Over the Air (OTA) / incremental FOTA
> LWM2M support with MODS (Module Services)
> Best in class power consumption current with eDRX and PSM
> Advanced Security
> Embedded Processing [**]

INTERFACES
> Pads for primary LTE antenna and GNSS antenna
> 2 High-speed 8 line serial interfaces
> USB 2.0 interface [**]
> UICC and U/SIM card interface 1.8V
> SPI, I2C, PWM signal line
> ADC interface

APPROVALS
> RED, CE, FCC, IC, UL, CCC
> GCF, PTCRB
> AT&T and other major MNO approvals
> EuP, REACH and RoHS compliant

DRIVERS
> Driver for Windows® 7 / Windows® 8 / Windows 10
> Driver for Linux
> RIL Driver for Android [**]

*) EXS 82 only
**) included in future firmware version

Connect. Secure. Monetize.™

Gemalto's complementary offering of solutions, services and platforms helps enterprises unleash the power of the IoT, providing a solid foundation of Trust based on three key pillars:

> Connect. The backbone of any IoT solution, Cinterion IoT Modules, SIM/MIMs, Terminals, Modem Cards and secure services provide future-proof, reliable connectivity for all vertical market IoT solutions.

> Secure. Gemalto's end-to-end security solutions protect devices, the network and the cloud while managing the entire application lifecycle.

> Monetize. Our agile monetization solutions enable innovative business models and new revenue streams through embedded licensing.

For more information, please visit: www.gemalto.com/IoT, www.facebook.com/gemalto, or Follow @gemaltoIoT on Twitter.

GEMALTO.COM/IoT

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